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CAHOKIA OR MONK'S MOUND

By CYRUS THOMAS

There is one fact in regard to the mound group in the Mississippi or "American" bottom, six miles east of St Louis, known as the Cahokia mounds, which has not received that consideration from archeologists and antiquarians it deserves. As is well known, the largest tumulus of the group, called the Cahokia or Monk's mound, is the largest prehistoric earthen structure in the United States.

As this mound has been frequently figured and described — even a model having been cast in iron — a very brief description will suffice for the present purpose. "It is," says Mr David I. Bushnell, Jr,[1] "a truncated rectangular pyramid, rising to a height of one hundred feet above the original surface. The dimensions of the base are: from north to south 1,080 feet; from east to west 710 feet. The area of the base is about 16 acres. Viewed from the east it appears regular in form, and three terraces are clearly defined." The lowest of these terraces, which is the only one necessary for us to notice here, is much the largest of the three, and, according to the author quoted, "is 500 feet from east to west [that is, across the face of the mound], and 200 feet from north to south" — that is, extending outward from the mound. Mr Bushnell does not mention the height of this terrace, but William McAdams[2] states that it is 30 feet. The latter authority gives the dimensions of the base of the mound as 721 feet east and west by 998 feet north and south, and the height 99 feet.

As the dimensions of the base mentioned by Mr Bushnell would make the area 17.5 acres instead of 16, we shall accept those of Mr McAdams. Allowing for the terrace the same under slope against the mound as at the outer surface, the contents would be the same as those of a rectangular mass 500 feet long, 200 feet wide, and 30 feet thick; in other words, 3,000,000 cubic feet. This would leave the base of the true mound, following McAdams' measurements, 798 by 721 feet. Assuming the slopes to terminate in a point at the top — which would give less than the true solid contents — the contents of the mound (omitting the terrace) would be 18,987,000; adding the terrace makes the total contents about 22,000,000 cubic feet.[1]

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[1] The Cahokia and Surrounding Mound Groups, *Peabody Museum Papers*, III, no. 1, 1904.

[2] *Antiquities of Cahokia or Monk's Mound*, p. 1, 1883.

As it is now generally conceded that these prehistoric structures were built by Indians, we have the puzzling problem presented of explaining how this great mass was heaped up by natives who had neither beasts for draft or bearing burdens, nor vehicles for conveying materials, nor iron tools; but must have carried the earth by individual loads, in baskets or native cloth, or in some similar way. Nor is this the only point needing explanation; for it is apparent that the builders must have been able in some way to assemble and operate their forces in a lengthened effort. The method by which they built up these mounds is not a mere supposition, as the lumps or small masses of earth which formed the individual loads have been observed in several instances.

To build up a mound in the manner indicated was slow work; but Mr Gerard Fowke, who has had practical experience in excavating mounds, concludes that a hundred persons, with only the means at hand that the Indians could have employed, could heap an earthern tumulus 100 feet in diameter at the base and 20 feet high in 42 days. As the earth is usually obtained immediately around the base, generally the loose surface soil, Mr Fowke assumes that each person could dig and carry up 25 loads per day, averaging half a cubic foot to the load.

As the contents of the Cahokia mound are equal to 420 times those of Mr Fowke's assumed tumulus, it would require the hundred persons, laboring in the same way, to work every day for forty-eight years to construct the great tumulus. As this is not even supposable, we may assume the tribe was comparatively strong and could put a thousand laborers at the work, who, working at the same rate, might complete the structure in 4.8, or, in round numbers, 5 years. That no tribe of Indians ever did, would, or could devote five years of constant labor to the erection of a single tumulus, will probably be admitted by every one acquainted with Indian character.

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[1] The estimate given by the writer in a previous publication was not only based on lower measurements, but omitted the terrace from the reckoning.

In order to study the question from different points, let us suppose the tribe, or combined tribes if more than one, could put 5,000 persons at the work ; it would still require an entire year. As it is not likely that any tribe ever kept 5,000 of the population at work on a single mound continuously for a year, we must resort to some more likely theory.

That Mr Fowke's estimate of the number and size of the loads is reasonable will probably be admitted. Moreover it is applicable to the case in point, as the large depression about the eastern and northeastern base of the mound shows plainly where the material for its construction was obtained. And although digging round the base would have a tendency to exaggerate the height, the natural surface of the ground is very apparent on the southwestern and western sides, from which it seems no earth was taken. That no natural elevation existed here may be assumed without doubt, judging from all the indications. It is evident, therefore, that no material change can be made in our calculation. Slightly increasing the size and number of loads to the individual, would decrease the time, though to a small extent only if the assumption be kept within reasonable limits.

It would seem, therefore, that the only reasonable supposition is that the mound was built up by successive additions. How often these were made, and how much was added at one period, must be wholly conjectural. If we suppose the tribe living at this point to have been a populous one, which was probably the case — say ten or twelve thousand — it is not probable that they would have added more than the equivalent of the great terrace in a season ; far more likely not more than half that, as the terrace, calculating on the basis assumed, would have required 5,000 persons at work constantly for 80 days. The work, therefore, when we take into consideration the 65 or 70 other mounds of the group, several of which contain each 250,000 cubic feet of earth, must have been carried on at intervals for several, perhaps many, years.

These facts present some puzzling problems to which we invite the attention of American archeologists and antiquarians — not only those suggested by what precedes, but those bearing on the subject of the probable or even possible builders. The artifacts discovered on the site do not differ in any appreciable respect from those along the banks of the southern Mississippi, especially in southeastern Missouri and eastern Arkansas. Professor W. H. Holmes, the leading authority on ancient American pottery, who has seen Dr Patrick's collections from the group, says there has been found here no type that is appreciably different from the types of the pottery district of the southern Mississippi. We seem therefore to be limited in our search for the builders to a tribe or people found inhabiting more southerly regions at the time of the first coming of the whites. That the mounds of the group are not attributable to the Cahokia or any other Algonquian tribe of Illinois may be asserted with confidence. If it be conceded that we must look to the Southern states for the builders, then it will be agreed that the tribal movement was southward.

Although there are reasons for believing the mounds were covered with timber in the year 1700, there are no indications leading to the conclusion that they belong to a period of great antiquity.

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